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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/809,399	03/26/2004	Takesi Yamakawa	0757-0285PUS1	7539
2292	7590	12/12/2006	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			TRAN, DALENA	
			ART UNIT	PAPER NUMBER
			3661	

DATE MAILED: 12/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/809,399

**Applicant(s)**

YAMAKAWA ET AL.

**Examiner**

Dalena Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### Notice to Applicant(s)

1. This application has been examined. Claims 1-8 are pending.

#### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3, and 5-8, are rejected under 35 U.S.C.103(a) as being unpatentable over Kawada et al. (3656043) in view of Hagenbuch (7039507).

As per claims 1 and 7, Kawada et al. disclose a control system for controlling a control quantity of a subject to be controlled, said control system comprising: a control quantity acquisition section for sequentially acquiring instantaneous values of the control quantity (see columns 1-2, lines 63-22); a timing judgment section for sequentially determining a time duration of each of specific kinds of behaviors of the controlled subject based on the values of the control quantity acquired by the control quantity acquisition section (see column 2, lines 23-63); and a behavior pattern judgment section for sequentially determining a behavior pattern which each of the behavior of the controlled subject matches from among multiple behavior patterns based on the values of the control quantity acquired by the control quantity acquisition section during the time duration of each of the behaviors sequentially determined by the timing judgment section (see columns 3-5, lines 33-34). Kawada et al. do not disclose a control parameter

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storage, and read-out. However, Hagenbuch discloses a control parameter storage section for storing control parameters in correlation with each of the multiple behavior patterns (see the abstract; and columns 2-3, lines 3-8); a control parameter read-out section for sequentially reading out the control parameters stored in the control parameter storage section in correlation with the behavior pattern which each of the behaviors of the controlled subject matches as determined by the behavior pattern judgment section (see column 3, lines 9-37; columns 5-6, lines 17-13; columns 9-11, lines 21-20; and columns 13-14, lines 19-12); and a control section for controlling the controlled subject based on the control parameters sequentially read out by the control parameter read-out section. (see columns 7-8, lines 44-53; and columns 12-13, lines 28-18). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Kawada et al. by combining a control parameter storage, and read-out for controlling vehicle operating system.

As per claim 2, Kawada et al. disclose a behavior evaluation value calculating section for sequentially calculating an evaluation value of the behavior performed by the controlled subject based on the values of the control quantity acquired by the control quantity acquisition section during the time duration of each of the behaviors sequentially determined by the timing judgment section (see columns 3-5, lines 33-34). Kawada et al. do not disclose a control parameter update. However, Hagenbuch discloses a control parameter update section for updating the control parameters stored in the control parameter storage section based on the evaluation value sequentially calculated by the behavior evaluation value calculating section (see columns 15-16, lines 11-41; and columns 22-24, lines 49-13). It would have been obvious to one of ordinary skill in the

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art at the time the invention was made to modify the teach of Kawada et al. by combining a control parameter update to provide current vehicle operating parameter to control the system.

As per claim 3, Hagenbuch discloses the control parameter update section updates the control parameters used during the time duration of each behavior corresponding to the evaluation value sequentially calculated by the behavior evaluation value calculating section (see columns 22-24, lines 49-13).

As per claim 5, Kawada et al. disclose the controlled subject is a ship, the control quantity is the ship's heading, and the control section controls a steering device of the ship (see columns 3-5, lines 32-34).

Claims 6, and 8, are method claims corresponding to system claims 1 and 7 above. Therefore, they are rejected for the same rationales set forth as above.

4. Claim 4, is rejected under 35 U.S.C.103(a) as being unpatentable over Kawada et al. (3656043), and Hagenbuch (7039507) as applied to claim 1 above, and further in view of Hirokawa et al. (3696282).

As per claim 4, Kawada et al., and Hagenbuch do not disclose take extrema. However, Hirokawa et al. disclose the timing judgment section determines timings at which the control quantity acquired by the control quantity acquisition section take extrema as being a start timing and an end timing of the time duration of each of the behaviors based on the values of the control quantity acquired by the control quantity acquisition section (see column 3, lines 10-67; and columns 4-6, lines 57-3). It would have been obvious to one of ordinary skill in the art at the time the invention was made to

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modify the teach of Kawada et al., and Hagenbuch by combining take extrema for accurately control vehicle operating system.

### **Conclusion**

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

. W.Kundler (3517285)

. Charles R. Wesner (3604907)

. Scribner et al. (5014206)

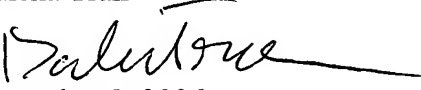
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dalena Tran whose telephone number is 571-272-6968. The examiner can normally be reached on M-F 6:30 AM-4:00 PM), off every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Black can be reached on 571-272-6956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Patent Examiner  
Dalena Tran

A handwritten signature in black ink, appearing to read 'Dalena Tran', with a long horizontal flourish extending to the right.

December 8, 2006